

# **Abstract**

A wire feeder for an electric arc welder comprising a set of feed rolls driven by a DC motor with a commutator, first and second opposite polarity leads receiving power to drive the motor, and having a first brush at a given position on the commutator and connected to the first lead, a second brush circumferentially spaced from the first brush a first annular distance around the commutator and connectable to the second lead to cause the motor to rotate at a first speed to drive the rolls at a first speed, a third brush circumferentially spaced from the first brush a second annular distance around the commutator and connectable to the second lead to cause the motor to rotate at a second speed to drive the rolls at a second speed, and a switching circuit with an operative condition to connect the second lead to a selected one of the second and third brushes.